

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.**

<i>In the Matter of</i>)	
)	
Promoting Efficient Use of Spectrum)	
Through Elimination of Barriers to the)	WT Docket No. 00-230
Development of Secondary Markets)	
)	
)	

REPLY COMMENTS OF THE SDR FORUM

The comments in this proceeding are uniformly supportive of the Commission's secondary-markets proposal.¹ The SDR Forum encourages the Commission to do all that it can to make secondary markets a reality.

We also want to emphasize three particular areas of agreement: *first*, that Software Defined Radio ("SDR") technology will help to fulfill the Commission's goals for spectrum leasing; *second*, that secondary markets will be most successful if the Commission strips away unnecessary service rules and focuses instead on ways to avoid increases in harmful interference; and *third*, that the *Intermountain* "control" test cannot be applied to leased spectrum.

SDR Will Help Make Secondary Markets Work. The Commission is already aware that SDR-based infrastructure will be capable of supporting multiple services that otherwise would each require a separate infrastructure,² and that SDR-enabled equipment

¹ *Notice of Proposed Rulemaking*, FCC 00-402, WT Docket No. 00-230 (rel. Nov. 27, 2000) (hereinafter "Notice").

² See Comments of the SDR Forum at 3-4.

is being designed to improve spectrum efficiency.³ Some SDR Forum members, for example, are developing “universal” base stations designed to support multiple wireless services and even redistribute traffic loads among services, while others are designing “software radios” to permit SDR equipment to be reconfigured quickly and cheaply. These technological achievements, of course, will require time and money. Their implementation will also depend on the widespread deployment of SDR technology in commercial wireless base stations and handsets, a process that will itself take time. Eventually, though, SDR technology will help achieve the core goals of this proceeding.

SDR will make it easier for licensees to transfer spectrum rights to those who value them the most, to migrate to less congested frequencies, and to upgrade to more spectrum-efficient technologies. Although the commercial introduction of the most revolutionary SDR technology lies in the future, the Commission is doing precisely the right thing by proposing to remove unnecessary regulatory barriers, leaving it to the marketplace to decide when and how new technologies will be adopted.

Preventing Interference Should Be the Paramount Concern. Even without this proceeding, SDR technology would be of great benefit in allowing licensees to share spectrum with other providers that offer like services. From the SDR perspective, what is really new and exciting about this *Notice* is the possibility of enabling various bands to be used for services that were not originally anticipated. We therefore urge the Commission to follow through with its proposal to expand the range of permissible uses in any given band and let the marketplace decide how the spectrum will be used.

At the same time, of course, the Commission must draw one line in the sand: any new use of a band must not increase harmful interference to others using that band or

³ See, e.g., *id.* at 3.

those using adjacent bands. Since acceptable interference levels vary greatly by existing uses, it is not feasible to think that the Commission could establish across-the-board adjacent-channel interference criteria. However, the Commission can—and should—establish ***absolute adjacent-channel interference criteria*** for particular bands, based on the acceptable interference levels for existing uses in those bands.⁴ This will allow lessees that want to introduce new services to a band to do so, provided that their signal masks do not cross over into adjacent bands at higher levels than do those of existing users.

The choice of how to stay within existing interference limits should be left up to each individual lessee. If the new mask would exceed the current mask, for example, possible solutions would be to invest in more advanced radio technology, or to leave a guardband. The key is that these decisions should be made by the marketplace, and should leave users the flexibility to adjust their systems as technological advances enable more efficient use of the spectrum.

***Intermountain Microwave*⁵ Cannot Coexist With Secondary Markets.** The initial round of comments confirms the Commission’s tentative conclusion that the *Intermountain Microwave* “control” test is an anachronistic, unnecessary impediment to the creation of secondary markets.⁶ Although the SDR Forum does not take a position on the exact analysis that should replace *Intermountain Microwave* in the leased-spectrum

⁴ Requiring new uses not to exceed the signal masks of existing uses is an appropriately conservative starting point, but it may well prove to be overly restrictive. The Commission should leave open the possibility of relaxing specific requirements if it is shown that doing so will not cause harmful interference.

⁵ See Notice ¶ 72 (citing *Intermountain Microwave*, 12 FCC 2d 559, 24 RR 983 (1963)).

⁶ See Comments of AT&T Wireless Services, Inc. at 12; Comments of CTIA at 11; Comments of Cook Inlet Region, Inc. at 12; Comments of the Land Mobile Communications Council at 3; Comments of Long Lines, Ltd. at 1; Comments of Nextel Communications, Inc. at 3; Comments of Pacific Wireless Technologies, Inc. at 6; Comments of the Rural Telecommunications Group at 20; Comments of the Small

context, we urge the Commission to keep its eyes on the prize—developing a standard that, *without undue uncertainty*, permits licensees “to enter into spectrum leasing arrangements without the need for prior Commission approval.”⁷

Conclusion

The SDR Forum strongly supports the goals of this proceeding, and we believe that SDR will help reach those goals. We also encourage the Commission to continue to focus its attention on eliminating unnecessary service-class rules and declaring that *Intermountain Microwave* will not stand in the way of secondary markets. We look forward to assisting the Commission in creating an efficient market for leased spectrum.

Respectfully submitted,

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Business Administration’s Office of Advocacy at 2; Comments of Sprint Corp. at 1; Comments of Teligent, Inc. at 3-6; Comments of Verizon Wireless at 2; Comments of Winstar Communications, Inc. at 9.

⁷ Notice at ¶ 78.